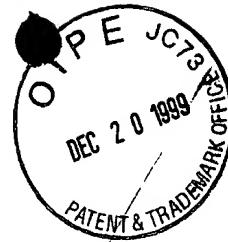


SEQUENCE LISTING



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<110> Irwin J. Griffith et al.

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<140> 08/737,904

<141> 1996-11-20

<150> 08/106,016

<151> 1993-08-13

<160> 61

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 Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Gly Pro Ala
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 Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Thr Pro Ala Ala Ala Thr
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ccg gct act cct gct gcc acc ccg gct gcg gct gga ggg aag gcg acg 198
 Pro Ala Thr Pro Ala Ala Thr Pro Ala Ala Ala Gly Gly Lys Ala Thr
 40 45 50

acc gac gag cag aag ctg ctg gag gac gtc aac gct ggc ttc aag gca 246
 Thr Asp Glu Gln Lys Leu Leu Glu Asp Val Asn Ala Gly Phe Lys Ala
 55 60 65

gcc gtg gcc gct gcc aac gcc cct ccg gcg gac aag ttc aag atc 294
 Ala Val Ala Ala Ala Asn Ala Pro Pro Ala Asp Lys Phe Lys Ile
 70 75 80 85

ttc gag gcc gcc ttc tcc gag tcc tcc aag ggc ctc ctc gcc acc tcc 342
 Phe Glu Ala Ala Phe Ser Glu Ser Ser Lys Gly Leu Leu Ala Thr Ser
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gcc gcc aag gca ccc ggc ctc atc ccc aag ctc gac acc gcc tac gac 390

Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys Leu Asp Thr Ala Tyr Asp
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 gtc gcc tac aag gcc gag ggc gcc acc ccc gag gcc aag tac gac 438
 Val Ala Tyr Lys Ala Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp
 120 125 130
 gcc ttc gtc act gcc ctc acc gaa gcg ctc cgc gtc atc gcc ggc gcc 486
 Ala Phe Val Thr Ala Leu Thr Glu Ala Leu Arg Val Ile Ala Gly Ala
 135 140 145
 ctc gag gtc cac gcc gtc aag ccc gcc acc gag gag gtc cct gct gct 534
 Leu Glu Val His Ala Val Lys Pro Ala Thr Glu Glu Val Pro Ala Ala
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 aag atc ccc acc ggt gag ctg cag atc gtt gac aag atc gat gct gcc 582
 Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp Lys Ile Asp Ala Ala
 170 175 180
 ttc aag atc gca gcc acc gcc gca aac gcc ccc acc aac gat aag 630
 Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala Pro Thr Asn Asp Lys
 185 190 195
 ttc acc gtc ttc gag agt gcc ttc aac aag gcc ctc aat gag tgc acg 678
 Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala Leu Asn Glu Cys Thr
 200 205 210
 ggc ggc gcc tat gag acc tac aag ttc atc ccc tcc ctc gag gcc gcg 726
 Gly Gly Ala Tyr Glu Thr Tyr Lys Phe Ile Pro Ser Leu Glu Ala Ala
 215 220 225
 gtc aag cag gcc tac gcc gca acc gtc gcc gcc gcg ccc gag gtc aag 774
 Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala Pro Glu Val Lys
 230 235 240 245
 tac gcc gtc ttt gag gcc gcg ctg acc aag gcc atc acc gcc atg acc 822
 Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met Thr
 250 255 260
 cag gca cag aag gcc ggc aaa ccc gct gcc gct gcc aca ggc gcc 870
 Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala Ala Ala Thr Gly Ala
 265 270 275
 gca acc gtt gcc acc ggc gcc gca acc gcc gcc ggt gct gcc acc 918
 Ala Thr Val Ala Thr Gly Ala Ala Thr Ala Ala Gly Ala Ala Thr
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 Ala Ala Ala Gly Gly Tyr Lys Ala
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 ttttgaatct gtaaatcccc atgacaagta gtggatcaa gtcggcatgt atcaccgttg 1152

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<213> *Lolium perenne*

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1 5 10 15
Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Thr Pro
20 25 30
Ala Ala Ala Ala Thr Pro Ala Thr Pro Ala Ala Thr Pro Ala Ala Ala
35 40 45
Gly Gly Lys Ala Thr Thr Asp Glu Gln Lys Leu Leu Glu Asp Val Asn
50 55 60
Ala Gly Phe Lys Ala Ala Val Ala Ala Ala Asn Ala Pro Pro Ala
65 70 75 80
Asp Lys Phe Lys Ile Phe Glu Ala Ala Phe Ser Glu Ser Ser Lys Gly
85 90 95
Leu Leu Ala Thr Ser Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys Leu
100 105 110
Asp Thr Ala Tyr Asp Val Ala Tyr Lys Ala Ala Glu Gly Ala Thr Pro
115 120 125
Glu Ala Lys Tyr Asp Ala Phe Val Thr Ala Leu Thr Glu Ala Leu Arg
130 135 140
Val Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu
145 150 155 160
Glu Val Pro Ala Ala Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp
165 170 175
Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala
180 185 190
Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala
195 200 205
Leu Asn Glu Cys Thr Gly Gly Ala Tyr Glu Thr Tyr Lys Phe Ile Pro
210 215 220
Ser Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala
225 230 235 240
Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala

245 250 255
Ile Thr Ala Met Thr Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala Ala
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290 295 300

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<213> Lolium perenne

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1 5 10 15
Ala Ala Thr Pro
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<213> Lolium perenne

<400> 4
Ala Thr Pro Ala Thr Pro Ala Ala Ala Thr Pro Ala Ala Ala Gly Gly Lys
1 5 10 15
Ala Thr Thr Asp
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<210> 5
<211> 20
<212> PRT
<213> Lolium perenne

<400> 5
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1 5 10 15
Asp Val Asn Ala
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<210> 6
<211> 20
<212> PRT
<213> Lolium perenne

<400> 6

Glu Gln Lys Leu Leu Glu Asp Val Asn Ala Gly Phe Lys Ala Ala Val.
1 5 10 15

Ala Ala Ala Ala
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<210> 7
<211> 16
<212> PRT
<213> Lolium perenne

<400> 7
Gly Phe Lys Ala Ala Val Ala Ala Ala Asn Ala Pro Pro Ala Asp
1 5 10 15

<210> 8
<211> 20
<212> PRT
<213> Lolium perenne

<400> 8
Asn Ala Pro Pro Ala Asp Lys Phe Lys Ile Phe Glu Ala Ala Phe Ser
1 5 10 15

Glu Ser Ser Lys
20

<210> 9
<211> 20
<212> PRT
<213> Lolium perenne

<400> 9
Phe Glu Ala Ala Phe Ser Glu Ser Ser Lys Gly Leu Leu Ala Thr Ser
1 5 10 15

Ala Ala Lys Ala
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<210> 10
<211> 20
<212> PRT
<213> Lolium perenne

<400> 10
Gly Leu Leu Ala Thr Ser Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys
1 5 10 15

Leu Asp Thr Ala
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<210> 11

<211> 20
<212> PRT
<213> Lolium perenne

<400> 11
Pro Gly Leu Ile Pro Lys Leu Asp Thr Ala Tyr Asp Val Ala Tyr Lys
1 5 10 15
Ala Ala Glu Gly
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<210> 12
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<213> Lolium perenne

<400> 12
Tyr Asp Val Ala Tyr Lys Ala Ala Glu Gly Ala Thr Pro Glu Ala Lys
1 5 10 15
Tyr Asp Ala Phe
20

<210> 13
<211> 20
<212> PRT
<213> Lolium perenne

<400> 13
Ala Thr Pro Glu Ala Lys Tyr Asp Ala Phe Val Thr Ala Leu Thr Glu
1 5 10 15
Ala Leu Arg Val
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<210> 14
<211> 20
<212> PRT
<213> Lolium perenne

<400> 14
Val Thr Ala Leu Thr Glu Ala Leu Arg Val Ile Ala Gly Ala Leu Glu
1 5 10 15

Val His Ala Val
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<210> 15
<211> 20
<212> PRT
<213> Lolium perenne

<400> 15

Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
1 5 10 15

Val Pro Ala Ala
20

<210> 16
<211> 20
<212> PRT
<213> Lolium perenne

<400> 16
Lys Pro Ala Thr Glu Glu Val Pro Ala Ala Lys Ile Pro Thr Gly Glu
1 5 10 15

Leu Gln Ile Val
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<210> 17
<211> 20
<212> PRT
<213> Lolium perenne

<400> 17
Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp Lys Ile Asp Ala Ala
1 5 10 15

Phe Lys Ile Ala
20

<210> 18
<211> 20
<212> PRT
<213> Lolium perenne

<400> 18
Asp Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala
1 5 10 15

Ala Pro Thr Asn
20

<210> 19
<211> 20
<212> PRT
<213> Lolium perenne

<400> 19
Ala Thr Ala Ala Asn Ala Ala Pro Thr Asn Asp Lys Phe Thr Val Phe
1 5 10 15

Glu Ser Ala Phe
20

<210> 20
<211> 20
<212> PRT
<213> Lolium perenne

<400> 20
Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala Leu Asn Glu
1 5 10 15

Cys Thr Gly Gly
20

<210> 21
<211> 20
<212> PRT
<213> Lolium perenne

<400> 21
Asn Lys Ala Leu Asn Glu Cys Thr Gly Gly Ala Tyr Glu Thr Tyr Lys
1 5 10 15

Phe Ile Pro Ser
20

<210> 22
<211> 20
<212> PRT
<213> Lolium perenne

<400> 22
Ala Tyr Glu Thr Tyr Lys Phe Ile Pro Ser Leu Glu Ala Ala Val Lys
1 5 10 15

Gln Ala Tyr Ala
20

<210> 23
<211> 20
<212> PRT
<213> Lolium perenne

<400> 23
Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ala Ala
1 5 10 15

Pro Glu Val Lys
20

<210> 24
<211> 20
<212> PRT

<213> Lolium perenne

<400> 24

Ala Thr Val Ala Ala Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala
1 5 10 15

Ala Leu Thr Lys
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<210> 25

<211> 20

<212> PRT

<213> Lolium perenne

<400> 25

Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala Ile Thr Ala Met Thr
1 5 10 15

Gln Ala Gln Lys
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<210> 26

<211> 20

<212> PRT

<213> Lolium perenne

<400> 26

Ala Ile Thr Ala Met Thr Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala
1 5 10 15

Ala Ala Ala Thr
20

<210> 27

<211> 20

<212> PRT

<213> Lolium perenne

<400> 27

Ala Gly Lys Pro Ala Ala Ala Ala Thr Gly Ala Ala Thr Val Ala
1 5 10 15

Thr Gly Ala Ala
20

<210> 28

<211> 20

<212> PRT

<213> Lolium perenne

<400> 28

Gly Ala Ala Thr Val Ala Thr Gly Ala Ala Thr Ala Ala Gly Ala
1 5 10 15

Ala Thr Ala Ala
20

<210> 29
<211> 16
<212> PRT
<213> Lolium perenne

<400> 29
Thr Ala Ala Ala Gly Ala Ala Thr Ala Ala Ala Gly Gly Tyr Lys Ala
1 5 10 15

<210> 30
<211> 20
<212> PRT
<213> Lolium perenne

<400> 30
Ile Ala Lys Val Pro Pro Gly Pro Asn Ile Thr Ala Glu Tyr Gly Asp
1 5 10 15

Lys Trp Leu Asp
20

<210> 31
<211> 20
<212> PRT
<213> Lolium perenne

<220>
<221> Xaa at position 5 may be any amino acid

<220>
<221> Xaa at position 8 may be any amino acid

<400> 31
Ile Ala Lys Val Xaa Pro Gly Xaa Asn Ile Thr Ala Glu Tyr Gly Asp
1 5 10 15

Lys Trp Leu Asp
20

<210> 32
<211> 20
<212> PRT
<213> Lolium perenne

<400> 32
Thr Ala Glu Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp Tyr
1 5 10 15

Gly Lys Pro Thr

20

<210> 33
<211> 20
<212> PRT
<213> Lolium perenne

<400> 33
Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys Gly Tyr Lys Asn Val
1 5 10 15

Asp Lys Ala Pro
20

<210> 34
<211> 20
<212> PRT
<213> Lolium perenne

<400> 34
Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys Gly Tyr Lys Asp Val
1 5 10 15

Asp Lys Ala Pro
20

<210> 35
<211> 20
<212> PRT
<213> Lolium perenne

<400> 35
Cys Gly Tyr Lys Asp Val Asp Lys Ala Pro Phe Asn Gly Met Thr Gly
1 5 10 15

Cys Gly Asn Thr
20

<210> 36
<211> 22
<212> PRT
<213> Lolium perenne

<400> 36
Cys Gly Phe Asn Gly Met Thr Gly Cys Gly Asn Thr Pro Ile Phe Lys
1 5 10 15

Asp Gly Arg Gly Cys Gly
20

<210> 37
<211> 20

<212> PRT

<213> Lolium perenne

<400> 37

Pro Ile Phe Lys Asp Gly Arg Gly Cys Gly Ser Cys Phe Glu Ile Lys
1 5 10 15

Cys Thr Lys Pro
20

<210> 38

<211> 20

<212> PRT

<213> Lolium perenne

<400> 38

Ser Cys Phe Glu Ile Lys Cys Thr Lys Pro Glu Ser Cys Ser Gly Glu
1 5 10 15

Ala Val Thr Val
20

<210> 39

<211> 20

<212> PRT

<213> Lolium perenne

<400> 39

Glu Ser Cys Ser Gly Glu Ala Val Thr Val Thr Ile Thr Asp Asp Asn
1 5 10 15

Glu Glu Pro Ile
20

<210> 40

<211> 20

<212> PRT

<213> Lolium perenne

<400> 40

Thr Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe Asp
1 5 10 15

Leu Ser Gly His
20

<210> 41

<211> 20

<212> PRT

<213> Lolium perenne

<400> 41

Ala Pro Tyr His Phe Asp Leu Ser Gly His Ala Phe Gly Ser Met Ala

1 5 10 15

Asp Asp Gly Glu
20

<210> 42
<211> 20
<212> PRT
<213> Lolium perenne

<400> 42
Ala Phe Gly Ser Met Ala Asp Asp Gly Glu Glu Gln Lys Leu Arg Ser
1 5 10 15

Ala Gly Glu Leu
20

<210> 43
<211> 20
<212> PRT
<213> Lolium perenne

<400> 43
Glu Gln Lys Leu Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg
1 5 10 15

Val Lys Cys Lys
20

<210> 44
<211> 20
<212> PRT
<213> Lolium perenne

<400> 44
Glu Leu Gln Phe Arg Arg Val Lys Cys Lys Tyr Pro Asp Asp Thr Lys
1 5 10 15

Pro Thr Phe His
20

<210> 45
<211> 20
<212> PRT
<213> Lolium perenne

<400> 45
Tyr Pro Asp Asp Thr Lys Pro Thr Phe His Val Glu Lys Ala Ser Asn
1 5 10 15

Pro Asn Tyr Leu
20

<210> 46
<211> 20
<212> PRT
<213> Lolium perenne

<400> 46
Val Glu Lys Ala Ser Asn Pro Asn Tyr Leu Ala Ile Leu Val Lys Tyr
1 5 10 15
Val Asp Gly Asp
20

<210> 47
<211> 20
<212> PRT
<213> Lolium perenne

<400> 47
Val Glu Lys Gly Ser Asn Pro Asn Tyr Leu Ala Ile Leu Val Lys Tyr
1 5 10 15
Val Asp Gly Asp
20

<210> 48
<211> 20
<212> PRT
<213> Lolium perenne

<400> 48
Ala Ile Leu Val Lys Tyr Val Asp Gly Asp Gly Asp Val Val Ala Val
1 5 10 15
Asp Ile Lys Glu
20

<210> 49
<211> 20
<212> PRT
<213> Lolium perenne

<400> 49
Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys Trp
1 5 10 15
Ile Glu Leu Lys
20

<210> 50
<211> 20
<212> PRT
<213> Lolium perenne

<400> 50

Lys Gly Lys Asp Lys Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala Val
1 5 10 15

Trp Arg Ile Asp
20

<210> 51

<211> 20

<212> PRT

<213> Lolium perenne

<400> 51

Thr Pro Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr Glu
1 5 10 15

Gly Gly Thr Lys
20

<210> 52

<211> 20

<212> PRT

<213> Lolium perenne

<400> 52

Val Arg Tyr Thr Thr Glu Gly Gly Thr Lys Ser Glu Val Glu Asp Val
1 5 10 15

Ile Pro Glu Gly
20

<210> 53

<211> 20

<212> PRT

<213> Lolium perenne

<400> 53

Ser Glu Val Glu Asp Val Ile Pro Glu Gly Trp Lys Ala Asp Thr Ser
1 5 10 15

Tyr Ser Ala Lys
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<210> 54

<211> 33

<212> PRT

<213> Lolium perenne

<220>

<221> Xaa's at positions 7,13,16 and 20 may be any amino acid

<400> 54

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1 5 10 15

Ala Ala Thr Xaa Ala Ala Gly Gly Lys Ala Thr Thr Asp Glu Gln
20 25 30

Lys

<210> 55

<211> 20

<212> PRT

<213> Lolium perenne

<400> 55

Ala Lys Ser Thr Trp Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp
1 5 10 15

Asn Gly Gly Ala
20

<210> 56

<211> 20

<212> PRT

<213> Lolium perenne

<400> 56

Glu Ser Trp Gly Ala Val Trp Arg Ile Asp Thr Pro Asp Lys Leu Thr
1 5 10 15

Gly Pro Phe Thr
20

<210> 57

<211> 1181

<212> DNA

<213> Lolium perenne

<220>

<221> CDS

<222> (53)..(961)

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Val Gln Gln Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Ser Cys Arg
-20 -15 -10

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 Ala Arg Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro Ala Thr Pro
 -5 -1 1 5 10
 15 20 25
 30 35 40
 45 50 55
 60 65 70
 75 80 85 90
 95 100 105
 110 115 120
 125 130 135
 140 145 150
 155 160 165 170
 175 180 185
 190 195 200
 205 210 215
 220 225 230
 240 245 250
 255 260 265
 270 275 280
 285 290 298
 300 305 310
 315 320 325
 330 335 340
 345 350 355
 360 365 370
 375 380 385
 390 395 394
 400 405 410
 415 420 425
 430 435 442
 445 450 455
 460 465 470
 475 480 485
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 555 560 565
 570 575 580
 585 590 586
 595 600 605
 610 615 620
 625 630 634
 635 640 645
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 665 670 675
 680 685 682
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 700 705 710
 715 720 725
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 780 785 785
 790 795 795
 800 805 805
 810 815 815
 820 825 826

Val Ala Ser Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Thr Ala Leu
 220 225 230

aaa aag gcg gtc acc gcc atg tcc gag gcc cag aag gaa gcc aag ccc 874
 Lys Lys Ala Val Thr Ala Met Ser Glu Ala Gln Lys Glu Ala Lys Pro
 235 240 245 250

gcc acc gcc acc ccg acc ccc acc gca act gcc gcg gcc gtc gcc 922
 Ala Thr Ala Thr Pro Thr Pro Ala Thr Ala Ala Ala Val Ala
 255 260 265

acc aac gcc gcc ccc gtc gct gct ggt ggc tac aaa atc tgatcaactc 971
 Thr Asn Ala Ala Pro Val Ala Ala Gly Gly Tyr Lys Ile
 270 275

gctagcaata tacacatcca tcatgcacat atagagctgt gatgtatgt gcatgcac 1031
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 taatatataa ttgagtacta aaaaaaaaaa 1181

<210> 58
 <211> 279
 <212> PRT
 <213> Lolium perenne

<400> 58

Ala Asp Ala Gly Tyr Ala Pro Ala Thr Pro Ala Thr Pro Ala Thr Pro
 1 5 10 15

Ala Ala Pro Gly Ala Ala Val Pro Ala Gly Lys Ala Ala Thr Glu Glu
 20 25 30

Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Val Ala
 35 40 45

Ala Ala Ala Gly Val Pro Pro Gly Asp Lys Tyr Lys Thr Phe Val Glu
 50 55 60

Thr Phe Gly Lys Ala Ser Asn Lys Ala Phe Leu Gly Asp Leu Pro Thr
 65 70 75 80

Asn Tyr Ala Asp Val Asn Ser Arg Ala Gln Leu Thr Ser Lys Leu Asp
 85 90 95

Ala Ala Tyr Lys Leu Ala Tyr Asp Ala Ala Gln Gly Ala Thr Pro Glu
 100 105 110

Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile
 115 120 125

Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Ala Glu Glu
130 135 140

Val Lys Pro Ile Pro Ala Gly Glu Leu Gln Ile Val Asp Lys Ile Asp
145 150 155 160

Val Ala Phe Arg Thr Ala Ala Thr Ala Ala Asn Ala Ala Pro Thr Asn
165 170 175

Asp Lys Phe Thr Val Phe Glu Thr Thr Phe Asn Lys Ala Ile Lys Glu
180 185 190

Ser Thr Gly Gly Thr Tyr Glu Ser Tyr Lys Phe Ile Pro Thr Leu Glu
195 200 205

Ala Ala Val Lys Gln Ala Tyr Ala Ala Thr Val Ala Ser Ala Pro Glu
210 215 220

Val Lys Tyr Ala Val Phe Glu Thr Ala Leu Lys Lys Ala Val Thr Ala
225 230 235 240

Met Ser Glu Ala Gln Lys Glu Ala Lys Pro Ala Thr Ala Thr Pro Thr
245 250 255

Pro Thr Ala Thr Ala Ala Ala Val Ala Thr Asn Ala Ala Pro Val
260 265 270

Ala Ala Gly Gly Tyr Lys Ile
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<210> 59

<211> 20

<212> PRT

<213> Lolium perenne

<220>

<221> Xaa's at postions 7,13,16 and 20 may be any amino acid

<400> 59

Ala Asp Ala Gly Tyr Thr Xaa Ala Ala Ala Ala Thr Xaa Ala Thr Xaa
1 5 10 15

Ala Ala Thr Xaa

20

<210> 60

<211> 20

<212> PRT

<213> Lolium perenne

<220>

<221> Xaa's at postions 3,6 and 10 may be any amino acid

<400> 60
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1 5 10 15

Ala Thr Thr Asp
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<210> 61
<211> 303
<212> PRT
<213> Lolium perenne

<400> 61
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Cys Arg Ala Arg Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro Ala
-5 -1 1 5

Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Pro Gly Ala Ala Val Pro
10 15 20

Ala Gly Lys Ala Ala Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn
25 30 35 40

Ala Gly Phe Lys Ala Ala Val Ala Ala Ala Gly Val Pro Pro Gly
45 50 55

Asp Lys Tyr Lys Thr Phe Val Glu Thr Phe Gly Lys Ala Ser Asn Lys
60 65 70

Ala Phe Leu Gly Asp Leu Pro Thr Asn Tyr Ala Asp Val Asn Ser Arg
75 80 85

Ala Gln Leu Thr Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Asp
90 95 100

Ala Ala Gln Gly Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala
105 110 115 120

Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His
125 130 135

Ala Val Lys Pro Ala Ala Glu Glu Val Lys Pro Ile Pro Ala Gly Glu
140 145 150

Leu Gln Ile Val Asp Lys Ile Asp Val Ala Phe Arg Thr Ala Ala Thr
155 160 165

Ala Ala Asn Ala Ala Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Thr
170 175 180

Thr Phe Asn Lys Ala Ile Lys Glu Ser Thr Gly Gly Thr Tyr Glu Ser
185 190 195 200

Tyr Lys Phe Ile Pro Thr Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala

205

210

215

Ala Thr Val Ala Ser Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Thr
220 225 230

Ala Leu Lys Lys Ala Val Thr Ala Met Ser Glu Ala Gln Lys Glu Ala
235 240 245

Lys Pro Ala Thr Ala Thr Pro Thr Pro Thr Ala Thr Ala Ala Ala Ala
250 255 260

Val Ala Thr Asn Ala Ala Pro Val Ala Ala Gly Gly Tyr Lys Ile
265 270 275